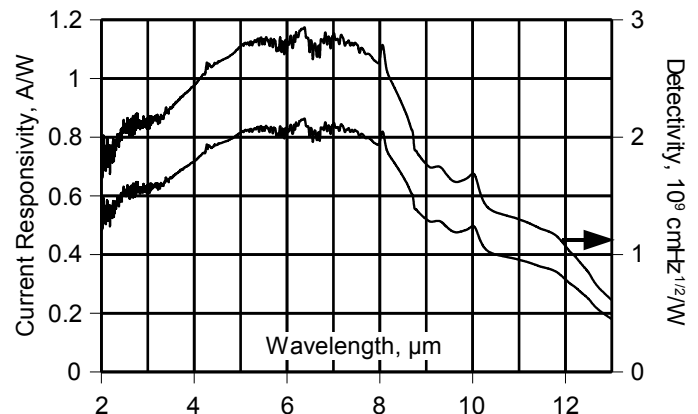
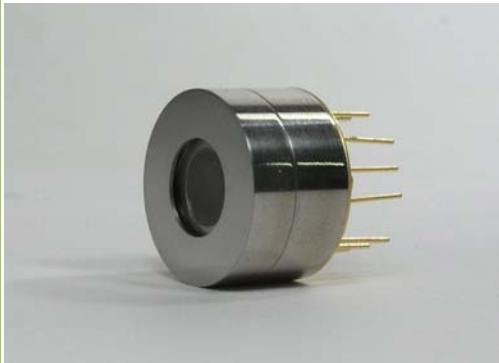


# PCI-2TE-13



## FTIR DEDICATED 2-13 $\mu\text{m}$ IR PHOTOCONDUCTOR THERMOELECTRICALLY COOLED OPTICALLY IMMERSED



### DESCRIPTION

PCI-2TE-13 is a wide spectral band FTIR dedicated photodetector. The device operates within the 1-13  $\mu\text{m}$  range, with performance boosted at short wavelength. The responsivity is stabilized with built-in two-stage Peltier cooler, keeping sensitive element at temperature 220-240 K. Performance of the devices has been improved with heterostructure design, optical resonance and hyperhemispherical immersion. Constant voltage bias and current readout should be used for the best performance and linearity.

The spectral response can be tuned according to requirements; better performance can be achieved for short cutoff wavelength devices. Standard detectors are available in modified TO-8 packages with  $\text{BaF}_2$  windows. Other packages, windows and connectors are available upon request.

### SPECIFICATION\*

@ 20°C

Wavelength,	$\mu\text{m}$	2	4	6	8	10	12
Detectivity,	$\text{cmHz}^{1/2}/\text{W}$	$1.8 \times 10^9$	$2.4 \times 10^9$	$2.9 \times 10^9$	$2.6 \times 10^9$	$1.6 \times 10^9$	$1 \times 10^9$
Current responsivity,	$\text{A/W}$	0.5	0.7	0.8	0.8	0.45	0.3

\*detector size  $1 \times 1 \text{mm}^2$

Other parameters: response time <10 ns, 1/f noise knee frequency <10 kHz, active area  $0.25 \times 0.25$ ;  $0.5 \times 0.5$ ;  $1 \times 1$ ;  $2 \times 2 \text{ mm}$ , bias field 5-10 V/cm, sheet resistivity 50-100 ohm, acceptance angle 35 deg, minimum f/# 1.6

### ACCESSORIES



Stand Alone  
Pre-amplifier/Supply



Integrated Pre-amplifier/Supply/Peltier  
Controller



Thermoelectric Cooler Controller



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